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Background:

The Directorate of Operations has a centralized information management system, directed by the Information Management Staff (IMS), which deals with all aspects of records keeping under Title 44 USC including related ADP applications, plus information flow, control, storage, classification, compartmentation, and protection of sources and methods.

This centralized information management function gives IMS the leading role in conceiving, designing and implementing information systems to meet the operational requirements of the Directorate of Operations. Management of information systems includes, in the DO, control of these same systems, making IMS at once both the creator and a major user.

In this context, in the summer of 1975, IMS began a major review with the aim of modernizing the DO information management system, taking into consideration changing operating conditions in the field, new legal constraints as well as budget and personnel limitations. The effort resulted in a report in November 1976: The DDO Records System: A blueprint for the 1980's.

One of many recommendations in that report was a phased development of automated information and operational support systems for the field. The DDO approved that recommendation on 30 December 1976, with the following initial objectives and tentative milestones:

- a. in the short term (within 3 years), [by 1980] assist field stations to achieve greater efficiency, better cover, and reduced visibility by:
 - reducing selected field station paper holdings (files and indices) to a minimum;
 - providing reliable, secure digital storage (limited) for essential and especially sensitive documents and indices which could be rapidly destroyed and easily reconstituted;

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- providing field stations with the capability to receive, store, retrieve, and compose messages using cathode ray tube (CRT) display terminals;
- interfacing with the Office of Communications' Automated Field Terminal (AFT) and NOC communications systems;

b. in the mid term (within 6 years), [by 1983] provide direct access to Headquarters information services by the field station and by the NOC officer; provide for remote updating and reconstruction of digitally stored files and indices, and interface with two-way agent and NOC communications systems;

c. in the long term (within 10 years) [by 1987] provide automated support to two-way communication of electrical messages, data, and bulk document and facsimile between NOC, the field station, and Headquarters.

CRAFT's direction and goals today are similar to the ones that were expressed over two years ago; however budget and personnel cuts have delayed the time schedule, and emphasis has shifted somewhat away from NOC's and facsimile [The development of the ██████████ Testbed and the overall implementation scheme for CRAFT are outlined in Appendix A.] ^{25X1A}

The key features of this concept - acronym CRAFT - were and are: (1) an overseas orientation; (2) a phased, step-by-step introduction of automated processes; and (3) integration of field stations into existing ADP applications already servicing the DO at Headquarters. As a result of a decision by the DDCI in 1978, CRAFT is not a budgetary line item. It instead became a conceptual framework for an incremental building-block approach to introduce elements of information automation to the field, each step to be tested and tailored to Stations' needs and capabilities, with accumulated experience added to each follow-on step.

*It was killed?
just hidden?*

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are there any other
kinds of registers?
Peggy

There is, it must be emphasized, a long-standing and absolute requirement for compartmentation of DO operational information from all other Agency holdings. This does not involve just compartmentation of the data, but also of the systems that use the data. The protection of DO assets and their activities is of such overriding concern, at a time when pressures work to break down compartmentation, that the Deputy Director for Operations has specifically ordered the containment of DO operational information within this Directorate.

Requirements:

The Directorate of Operations' mission is principally to recruit clandestine assets to collect intelligence and counterintelligence overseas. In information management terms, the key ingredient in this mission is the names and activities of people. People are the substance of nearly all DO operational traffic. Our problem has always been how to get the maximum amount of pertinent information on a target person or activity to the operational decision-maker in the shortest time. We have upgraded our information systems periodically since the early 1950's. These upgrades include the 10-year ALLSTAR development which enables computerized tracing, document location, personal accountability for materials, access controls, on-line updating of indices, and the digital capture and storage of most operational messages. These features improve the quality and speed of gaining access to information at Headquarters. They already exist! They are the basis for automating key field installations in the future connecting them to Headquarters computer power for direct tracing and references. (It is important to remember that field files and indices are not formal records; Headquarters keeps all official operational records.)

The validity of this systems concept depends, however, on its practicality overseas. In December 1976 the Deputy Director for Operations approved IMS' recommendation to design and test a prototype in a live domestic operational environment where mistakes could be minimized and system failures repaired easily. [REDACTED] is the 25X1A testbed. A CRAFT Interdirectorate Board and subsidiary working group, both comprising members of the Offices of

Communications, Security, Finance, Data Processing, Training and Technical Services, and chaired by IMS, began to define the [redacted] application in mid-78. A requirements paper and Project Management Plan have been published and the [redacted] CIA Executive Committee has been briefed about the [redacted] Testbed system. It will be functional in April 1980 for [redacted] officers to use and test against the short-term [redacted] requirements noted in the Background section above.

Please note that, in its first stage, [redacted] will draw computerized traces and references from its own local storage, not from Headquarters. But because nearly all of [redacted] operational reporting is done electrically, [redacted] can reconstitute or enlarge operational traces and correspondence from the Headquarters data base whenever necessary.

Capabilities

Automated field Stations will operate, with extremely few exceptions, under official cover. MODE limitations and cover considerations following from this fact already operate to hold down the total number of personnel who can be placed overseas. Station support now requires that a number of positions in the field be dedicated to personnel from the Offices of Finance, Logistics, Communications and Security, plus clerical personnel. From the DO's viewpoint, the existence of some of these functions overseas deducts from the total number of operational officers who can be placed in the field, and thus eats into the Station capabilities to work against operational missions. Computerizing finance journals, equipment inventories, safehouse records for direct transmittal and audit at Headquarters should eventually reduce field manpower expenditures for these support activities. Interfacing the Office of Communications Automated Field Terminal (AFT) to a CRAFT terminal will allow cables and telepouches to be prepared initially in machine language and transmitted without re-keying, thereby eventually cutting down on the number of communicators needed in the field. Personnel savings and more efficient use of operations personnel in the field should be a significant benefit gained by automating field stations.

We also count on improvements in Station records management; reducing the need for registries; reducing pouch needs (now costing over \$2.2 million per annum); and significantly reducing the profusion of paper and copies.

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regulations, required forms, and office machinery (typewriters, Xerox machines, safes) now needed to support a paper bureaucracy. With information in machine language, we expect commensurate improvements in field security and protection of sources/methods information by controlling data in machine form, and in the freedom to destroy and reconstitute Station records in emergency situations such as we experienced in [redacted] and more recently in some African 25X1A Latin American Stations.

It is to be noted that the Department of State and the FBI are automating some of their posts for the same reasons and in the same time frame we contemplate.

The personnel, security and efficiency savings are just one aspect of what we expect to gain. As noted above, the DO information management objective is to give the line operations officer more information, faster, and in a better form to facilitate decision making. Counterintelligence operations and positive intelligence operations frequently involve analysis of large masses of data on target personalities. Through the existing ALLSTAR computer compilation and manipulation features, Headquarters will be able to transmit to the field - in a form the field wants - aggregate collections pertinent and tailored to immediate operational objectives. Currently such compilations as, for instance, lists of known intelligence personnel, travel patterns, and presence lists for individual countries are sent to the field in microform or Xerox listings with delays of weeks or months depending on the priority of the need. Operational traces now require a desk analyst to sift through existing paper files and summarize current holdings to the field. Under the CRAFT concept, this process can be speeded up exponentially, even to the point of forwarding all pertinent index data and references to the field before or in parallel with the Headquarters analysis of the operational development. We already have the capability to assemble the indices and references at Headquarters. The CRAFT approach will allow us to disseminate information, and the Stations to hold it; purge it (without fear of losing it if needed later); and to a limited extent manipulate it to suit local and immediate needs.

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Introducing Automated Information Control and Flow
at a Field Station .

The substance of new information, how it is acquired, its sensitivity, quality, urgency and its pertinence to other data all vary and dictate the kind of handling for each individual item of information. The Station operations officer gets the original agent report or operational development. He reviews that information against station holdings, and makes an initial decision whether the new data is for internal station use only or should be reported to Headquarters. He prepares correspondence appropriate to the circumstances. This is reviewed by the Chief of Station, who authorizes its retention or dissemination to Headquarters. Information going to Headquarters electrically is processed through the station's communication facility and transmitted to Headquarters for relay via the Cable Dissemination System (CDS) to the action element at Headquarters. Headquarters reviews that information in the context of ALLSTAR holdings, incorporates new data into ALLSTAR and - in many cases - reports back to the station pertinent analysis and comments. Sensitive operational correspondence is controlled by the Chief of Station in the field. At Headquarters, sensitive sources and methods are controlled through a variety of compartmentation and routing procedures.

Station makeup also affects this "individualized" information flow. Size, mission, cover and operating environment all shape different stations in different ways. There is no "typical" overseas station in these terms, but there are rough similarities among small, medium and large stations. In this context, the [REDACTED] testbed is a 25X1A "large" station which, for reasons of mission, proximity to Headquarters and low risk appeared to be the best testing arena. [REDACTED] has been chosen as a "small" station 25X1A test site.

The first step in automating [REDACTED] 25X1A must be to have both operations and clerical personnel gain familiarization with and confidence in word processing equipment. We have completed this step in [REDACTED] 25X1A and the reaction is encouraging. The second step involves linking several word processors, permitting intra-station encrypted electrical transfer of cables and memoranda. (In [REDACTED] it required over six man-hours per week to transfer material in brief cases on the street with attendant security 25X1A

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implications - a person was struck by an automobile during one such transfer.). Once this process is proven workable, we will then connect the word processing network to a standalone minicomputer loaded with the Station's references and indices. This will allow a person using word processing equipment to request references and traces from the Station personality index. They also will be able to update cash journals, logs, inventories and other operational support files. The introduction of a minicomputer at this stage will enable a variety of systems controls for required compartmentation and routing of correspondence on "need-to-know" criteria established by the Chief of Station.

Depending on the outcome of the [REDACTED] and DCD experiences, we will build the first overseas prototype to be installed, tentatively, in FY 1982. [REDACTED] 25X1A Stations have already expressed an interest.

25X1A
[REDACTED] If that is successful, we would probably move to automate 25X1A about [REDACTED] stations from FY 1983 through FY 1985. In each or the larger field Stations we plan to use the same phased approach used for the [REDACTED] testbed. The end 25X1A objective in each case is a secure, compartmented, communicating network of intelligent terminals connected to a central Station information/communication processor. This combination in turn connects to the Staff communications network which transmits narrative messages and data, and ultimately affords access to the DO data banks at Headquarters.

Other Architecture Considerations:

At Headquarters we intend to utilize CDS and the Automated Printing and Reproduction System (APARS) in the short term for the dissemination of DO traffic. Other ALLSTAR systems, such as COMET (Collection of Messages Electrically Transmitted), STAR (Special Trace and Retrieval, DORIC/W (replacing WALNUT) and the Document Locator System store, retrieve and control the destruction of reference information. Later (1982) we aim to begin installing terminals/printers in DO country Branches which will be used for:

- 1) receipt and transmission of message traffic
- 2) access to the COMET, STAR, DORIC/W data bases.

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We will depend upon matriculation into the Headquarters Wide Band BUS system to disseminate field messages and data to Headquarters users and our storage/retrieval systems. The BUS also will be used to interconnect our Headquarters customers with DO information storage/retrieval systems mentioned above.

The staff communications system linking the field to Headquarters is a key part of this process. We will participate in the MAX/SKYLINK Upgrade during this same period to meet field requirements for data communications with Headquarters and to insure we stay compatible with Office of Communications' planning.

CRAFT and SAFE

In the field, we plan to use off-the-shelf equipment that is proven and compatible with ALLSTAR as well as with Office of Communications equipment. Cover and security requirements, varying and sometimes undependable electrical service, and individual Station communication interfaces will necessitate customizing of Agency standard equipment at some field installations. Distinct from SAFE which aims to be a complete automated information handling system for message handling and published intelligence in the Headquarters area, the objective of CRAFT is to tailor existing automation techniques to field information management needs.

When discussing CRAFT and SAFE, it is important to recognize that ALLSTAR has existed and been incrementally expanded upon since 1962. We would not be proceeding with the CRAFT concept if ALLSTAR did not already stand at its center. The DO, of course, recognizes a number of common goals and techniques in CRAFT and SAFE and for this reason is following SAFE developments closely. The DO's requirements have been included in the specifications for the new Delta Data standard terminal. We have funded our phase of the ADSTAR (DORIC/W) (remembering that ours must be compartmented from other Agency holdings), and we contribute to the wide-band BUS intra-Headquarters networking project. We are collaborating with the Office of Communications with respect to maintenance of equipment overseas and to disseminate correspondence in machine language through automated registries (APARS) similar to the project recently installed at the Department of State.

We believe we can offer the SAFE project some practical experience to support SAFE development, both in terms of user reaction, recovery of machine language references, access controls, and automated techniques for compartmentation and protection of sources and methods. This last point is particularly important: computerization and automated dissemination of large masses of classified data tend to be more sensitive and revealing than any one individual item of information. Data spillages, breakdowns in compartmentation, centralized holdings, breadth and speed of computer queries all adulterate efforts to protect sources and methods. While data encryption and other developing computer security techniques will help, standalone minicomputers, the complete containment of DO systems and data, and a centralized control and management of all our information systems are so far the only proven methods to assure restricted and secure handling of data on the people and methods that enable the DO to do its business.

*data
via
anytime!!*

Costs

The [REDACTED] Testbed system will be installed in FY 1980.
 FY 1979 through FY 1981 costs (in thousands) for this
 system are given below:

	<u>FY-78</u>	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>	<u>Total</u>
Capital Investment	340	140**	60****	27	540
Personnel and Travel	60*	150***	150***	--	387
Contractual Services	--	--	--	--	13
Equipment Rental	--	13	--	--	17
Supplies, Maintenance	2	15	--	--	15
ODP Costs	--	15	--	--	
TOTAL	402	333	210	27	972

* 2 IMS persons and part time OC, OS, OL; includes overseas TDY

** Upgrade for mini 87k, commo equipment and spare parts 50k

*** 4-5 IMS persons and part time OC, OS, OL

**** 3 additional word processing terminals

The first CRAFT Pilot system (called the Prototype Automated Field System) for large field stations will be installed at an overseas field station in FY 1982. FY 1979 through FY 1981 costs (in thousands) are as follows:

	<u>FY-79</u>	<u>FY-80</u>	<u>FY-81</u>	<u>Total</u>
Capital Investment	--	250*	270***	520
Personnel and Travel	--	75**	160****	235
Contractual Services	--	--	--	--
Equipment Rental	--	--	--	--
Supplies, Maintenance	--	15	25	40
ODP Costs	--	--	--	
TOTAL	--	340	455	795

* 1 mini-computer with upgrade 250

** 2 IMS persons and part time OC, OS, OL

*** Word processing terminals and communications equipment

**** 4-5 IMS persons and part time OC, OS, OL

Successful development of the Prototype Automated Field system will permit us to finalize the design of our system for large stations and start deployment of a production model of this system to large stations beginning in FY-83. A summary of our deployment schedule and related costs for FY-82 through FY-85 follows:

<u>FY</u>	Funds	Installation
1982	[REDACTED]	
1983	[REDACTED]	
1984	[REDACTED]	
1985	[REDACTED]	

*Costs for each Production model system is estimated to be 700k. This estimate is based on projected costs for the Prototype Automated Field system. Costs cited above include allowance for inflation.

Appendix A

CRAFT MILESTONES

A target schedule for the Domestic Testbed Pilots and the Automated Field Systems are listed below:

MILESTONES FOR DOMESTIC TESTBED SYSTEMS1979

January	<ul style="list-style-type: none"> o OL prepared work orders for EA and TW office modifications.
25X1A	<ul style="list-style-type: none"> o Coordinate key sections of requirements document with [REDACTED] o OC to receive maintenance training for Vydec word processors.
February	<ul style="list-style-type: none"> o Delivery of information storage and retrieval mini-computer to IMS Headquarters SDC. o Complete Security Survey of SDC. o Begin Site preparation Headquarters, SDC.
March	<ul style="list-style-type: none"> o IMS assisted by ODP completes requirements definition for Testbed system. o Completes office modifications to [REDACTED] X1A EA Branch.
April	<ul style="list-style-type: none"> o OC to begin assembly and testing of Vydec communications package in IMS Headquarters SDC. o Complete office modifications to [REDACTED] X1A TW Branch. o IMS completes Testbed Project Management Plan.

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April (continued)

- o Complete coordination of requirements document with [REDACTED] 25X1A
- o Begin detailed Testbed design.
- o Install Vydec workstation (without communications feature) at [REDACTED] 25X1A TW Branch.
- o IMS/SG assumes Project Management for Testbed.
- o Complete site preparation for relocation of [REDACTED] SE Branch.

25X1A

- o Install Vydec workstation (without communications feature) at [REDACTED] 25X1A EA Branch.

May 25X1A

- o [REDACTED], SE Branch relocates.
- o OC completes Tempest testing of Vydec configurations.

June 25X1A

- o Install Vydec workstation at current [REDACTED]
- o IMS and OC complete testing communicating Vydec workstations at IMS Headquarters SDC.

July

- o Install Vydec workstation in [REDACTED] 1A SE Branch.

August

- o OC installs Vydec communications feature and encryption hardware at all [REDACTED] sites.
- o FR reconfigure new Base Headquarters site.
- o OL and OC specify office layout and power and environmental requirements required at new Base Headquarters site.

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September o OC Tech receives Honeywell maintenance training.

December o Complete construction of office space at new Base Headquarters site.

 o OC completes maintenance training for mini-computers.

 o Complete office modifications to [REDACTED]

25X1A

1980

January o Install second Vydec with communicating feature at Base Headquarters site.

 o Install Vydec Word Processors in [REDACTED]

25X1A

February o Complete simulation testing of system in SDC in Headquarters.

March o IMS and OC begin installation of mini-computers at new Base Headquarters.

April o Operational capability at [REDACTED] 25X1A

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MILESTONES FOR AUTOMATED FIELD SYSTEMS1978

o [REDACTED]

25X1A

1980

- o Site Survey for first overseas prototype.
- o First Overseas Prototype Requirements and Management Plans written.
- o Office modifications completed for first overseas prototype.

1981

- o Training for Maintenance of overseas equipment.
- o Word processing installation at overseas prototype.
- o Receive, test and load data to overseas prototype mini-computer.

1982

- o First overseas prototype operational
- o Major Evaluation Document written from Domestic Testbed and First Overseas Pilot.
- o Surveys for [REDACTED] overseas installations. 25X1A
- o Requirement and Management Plans written for [REDACTED] overseas stations. 25X1A

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1983

- o Deployment of [REDACTED] overseas stations.*

1984

- o Deployment of [REDACTED] overseas stations.

25X1A

1985

- o Deployment of [REDACTED] overseas stations.

* Deployment of any overseas stations will involve

1. Site surveys from IMS, OC, OL, OS, OF personnel.
2. Requirement and Management Plans stating the needs of the station and methods of implementation.
3. Office modification if any.
4. Transportation of equipment.
5. User training and feedback on the improved services.
6. Maintenance plan.